

Subject Re: High correlation between indegree and outdegree
From Valdis Krebs <valdis@ORGNET.COM>
Sender Social Networks Discussion Forum <SOCNET@LISTS.UFL.EDU>
To <SOCNET@LISTS.UFL.EDU>
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Gloria,

Have you looked at symmetric ties between pairs of engineers?

For instance, if you send me X emails I will probably respond with X or X-n emails to you.... n being very small. If most of the email relationships are symmetric, then in-degree should be real close to out-degree for the group as a whole. We normally look at some designated frequency of exchange — if John send Mary at least 5 emails a week and Mary sends John at least 5 emails a week we consider this a symmetric tie of strength "weekly". That is how we did this analysis...

<http://orgnet.com/email.html>

Other people may be "data gatherers" during a project (i.e. send all timesheet to Juan) and therefore Juan and everyone in the Payroll department may have much higher in-degrees than out-degrees.

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On Oct 6, 2015, at 4:07 PM, Gloria Alvarez <glorialv@GMAIL.COM> wrote:

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Hello,

As part of my PhD research, I study a community of practice of engineers and how they share knowledge

While analyzing some centrality measures per department/country based on email Exchange patterns I found that while for some specific groups there is no correlation between indegree and outdegree for some others there is a linear relationship with $R^2=0,98$, the higher outdegree, the higher indegree.

Is there any explanation/law for this kind of topology/relationship from SNA perspective?

I have some hypothesis from innovation/knowledge perspectives.

Thanks for your support

Gloria

PS. I have already had a look into this article. How Correlated Are Network Centrality Measures?

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2875682/>

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